

ABSTRACT OF THE DISCLOSURE

An optical transmission apparatus, an optical repeater using the optical transmission apparatus, and an optical cross-connect equipment for controlling switches depending on supervisory information, comprising: a doped fiber for amplifying an optical signal of wavelength λ_d ; a wavelength multiplexer for outputting a pumping light to the doped fiber; a wavelength multiplexer for multiplexing an amplified optical signal and a supervisory optical signal to as to output it to an optical fiber at downstream side; a pumping and supervisory light source; an optical coupler for distributing the light from the light source at a ratio of N : 1 to the wavelength multiplexers; and a driver for controlling the light source by adding the supervisory information and a direct current signal.